



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,226	01/14/2004	Raymond J. Blasko	DP-310692	3255
22851	7590	11/15/2005	EXAMINER	
DELPHI TECHNOLOGIES, INC.			CARPIO, IVAN HERNAN	
M/C 480-410-202			ART UNIT	PAPER NUMBER
PO BOX 5052			2841	
TROY, MI 48007				

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/757,226

Applicant(s)

BLASKO ET AL.

Examiner

Ivan H. Carpio

Art Unit

2841

AW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1-14-04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

On page 8 of the *remarks and arguments* document filed on 09/01/05, applicant states that claim 14 was amended to state "terminals extending through the insulator block, having contact heads extending *from and above* a top surface of the insulator block, and having connector tails extending *from and below* a bottom surface of the insulator block". Looking at the amended claims document, filed on 09/01/05, shows this to be incorrect. However had this amendment been filed, *as stated in the remarks and argument document*, the rejection would look much like the rejection of claim 8.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1- 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asao (US Patent 6244877) and Kameyama (US Patent 6616480).

With respect to claim 1, Asao teaches an electrical assembly comprising, a lower housing (column 4, lines 41-42), a circuit board (figure 1, element 4 and column 6 lines 15 and 16) mounted in the lower housing an insulator block (figure 1, element 12) mounted on and in contact with an upper surface of the circuit board (figure 1, element

Art Unit: 2841

12), holding a plurality of conductive terminals (figure 1, elements 13a), so that the terminals have contact heads extending above a top surface of the insulator block and connector tails extending below a bottom surface of the insulator block and attached to the circuit board, upper housing (figure 1, element 2a) having an upstanding shroud (figure 1, element 5), means to attach the upper housing so that the contact heads of the terminals are disposed within the shroud (figure 1 and column 6 lines 15-17). Asao does not teach a face seal above the insulator block so that the contact heads of the terminals extend through the face seal and the face seal is compressed between the top surface of the insulator block and a lower surface of the upper housing. Kameyama teaches an electronic assembly (Fig. 5) with a face seal (Fig. 5, element 7) above an insulator block (Fig. 5, element 6) where the contact heads of terminals (Fig. 5, elements 5) extend through the face seal. It would have been obvious to one of ordinary skill in the art at the time of the invention to place a face seal, as taught by Kameyama, on top of an insulator block in an electronic assembly (thus between the insulator block and upper housing), as taught by Asao, for the purpose of protecting the circuits inside the housing from dust, moisture and other damaging outside elements.

With respect to claim 2 and in accordance with claim 1, Asao teaches that the shroud has an outer periphery (Fig. 1, element 5) and the insulator block has an outer periphery (Fig. 1, element 12) that is smaller than the outer periphery of the shroud.

With respect to claim 3 and in accordance with claim 2, Asao teaches that the smaller outer periphery of the insulator block provides a space beneath the upper housing for attaching electrical and/or electronic components to the circuit board

adjacent the insulator block (Fig.1 note the component 9 that is attached adjacent to the insulator block 12 and underneath the upper housing 5).

With respect to claim 4 and in accordance with claim 2, Asao teaches the smaller outer periphery of the insulation block is spaced inwardly of the outer periphery of the shroud (figure 1).

With respect to claim 5 and in accordance with claim 3, Asao teaches the smaller outer periphery of the insulation block is space inwardly of the outer periphery of the shroud (figure 1).

With respect to claim 7 and in accordance to claim 1, Asao teaches that the means to attach the upper housing includes the upper housing being attached to the lower housing (column 6, lines 16 and 17).

Claims 6,12,15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asao in view of Uleski (US Patent 5554037).

With respect to claims 6 and 12 and with all the limitations of claims 1 and 8 respectively, Asao teaches all of the limitations except that the means to attach the upper housing includes the upper housing attached to the insulator block. Uleski teaches means to attach (Fig. 1, elements 60 and 82) that includes an upper housing (Fig. 1, element 26) attached to an insulator block (Fig.1, element 60). It would have been obvious to one of ordinary skill in the art at the time of the invention to attach the upper housing to the insulator block, as taught by Uleski, in the electrical assembly,

Art Unit: 2841

taught by Asao, because doing so more securely attaches the electrical assembly and increases the effectiveness of the seal.

With respect to claim 15 and 16 and with all the limitations of claims 6 and 12, Uleski teaches an electrical assembly (Fig. 1) that includes an insulator block (Fig.1, element 60) with lateral extensions (Fig.1, elements 70) and wherein the means to attach the upper housing includes the upper housing being attached to the lateral extension.

Claims 8,9,10,11,13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asao in view of Kameyama and further in view of Uleski.

With respect to claim 8, Asao teaches an electrical assembly comprising a lower housing (column 4, lines 41-42), a circuit board (figure 1, element 4 and column 6 lines 15 and 16) mounted in the lower housing an insulator block (figure 1, element 12) mounted on and in contact with an upper surface of the circuit board (figure 1, element 12), holding a plurality of conductive terminals (figure 1, elements 13a), so that the terminals have contact heads extending above a top surface of the insulator block and connector tails extending below a bottom surface of the insulator block and attached to the circuit board and an upper housing (Fig.1, element 2a) having an upstanding shroud (Fig.1, element 5), and means to attach the upper housing so that the contact heads of the terminals are disposed within the shroud (Fig.1 element 13a and 5), and the shroud having an outer periphery (Fig.1 element 5) and the insulator block having an outer

Art Unit: 2841

periphery (Fig.1 element 12) that is smaller than the outer periphery of the shroud.

Asao does not teach that the terminals extend through the insulator block and have contact heads extending from and above a top surface of the insulator block and connector tails extending from and below a bottom surface of the insulator block.

Kameyama teaches an electrical assembly (Fig. 5) with terminals (Fig. 5, elements 5) that extend through an insulator block (Fig. 5, element 6) and have contact heads extending from and above a top surface of an insulator block and connector tails extending from and below a bottom surface of an insulator block. It would have been obvious to one of ordinary skill in the art at the time of the invention to manufacture the electrical assembly, taught by Asao, with the terminals installed through the insulator block, as taught by Kameyama, because doing so protects the terminals from outside elements as well as during the installation of extra components to the circuit board.

With respect to claim 9 and in accordance with claim 8, Asao teaches that the smaller outer periphery of the insulator block provides a space beneath the upper housing for attaching electrical and/or electronic components to the circuit board adjacent the insulator block (figure 1 note that component 9 is attached adjacent the insulator block).

With respect to claim 10 and in accordance with claim 8, Asao teaches the smaller outer periphery of the insulation block is space inwardly of the outer periphery of the shroud (figure 1).

With respect to claim 11 and in accordance with claim 9, Asao teaches the smaller outer periphery of the insulation block is space inwardly of the outer periphery of the shroud (figure 1).

With respect to claim 13 and in accordance to claim 8, Asao teaches that the means to attach the upper housing includes the upper housing being attached to the lower housing (column 6, lines 16 and 17).

With respect to claim 14, Asao teaches an electrical assembly comprising, a lower housing (column 4, lines 41-42), a circuit board (figure 1, element 4 and column 6 lines 15 and 16) mounted in the lower housing an insulator block (figure 1, element 12) mounted on and in contact with an upper surface of the circuit board (figure 1, element 12), holding a plurality of conductive terminals (figure 1, elements 13a), so that the terminals have contact heads extending above a top surface of the insulator block and connector tails extending below a bottom surface of the insulator block and attached to the circuit board, upper housing (figure 1, element 2a) having an upstanding shroud (figure 1, element 5), the shroud having an outer periphery (Fig. 1, element 5) and the insulator block has an outer periphery (Fig.1, element 12) that is smaller than the outer periphery of the shroud. Asao does not teach a face seal above the insulator block so that the contact heads of the terminals extend through the face seal and the face seal is compressed between the top surface of the insulator block and a lower surface of the upper housing and doesn't teach that the upper housing is attached to the insulator block. Kameyama teaches an electronic assembly (Fig. 5) with a face seal (Fig. 5, element 7) above an insulator block (Fig. 5, element 6) where the contact heads of

Art Unit: 2841

terminals (Fig. 5, elements 5) extend through the face seal. It would have been obvious to one of ordinary skill in the art at the time of the invention to place a face seal, as taught by Kameyama, on top of an insulator block in an electronic assembly (thus between the insulator block and upper housing), as taught by Asao, for the purpose of protecting the circuits inside if the housing from dust, moisture and other damaging outside elements. It would have been obvious to one of ordinary skill in the art at the time of the invention to attach the upper housing to the insulator block, as taught by Uleski, in the electrical assembly, taught by Asao, because doing so more securely attaches the electrical assembly and increases the effectiveness of the seal.

Response to Amendment

Arguments are moot in view of new grounds of rejection.

Conclusion

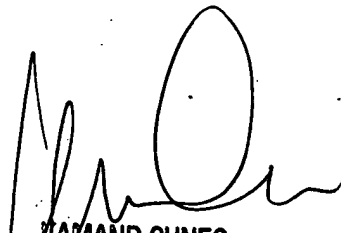
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ivan H. Carpio whose telephone number is 571-272-8396. The examiner can normally be reached on M-R 6:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kammie Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2841

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ic



RAYMOND CUNEO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800